National Institute of Environmental Health Sciences

Influence of climatic variables on acute myocardial infarction hospital admissions

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Abstract:

BACKGROUND: Seasonal peaks in acute myocardial infarction (AMI) incidence have been widely reported. Weather has been postulated to be one of the elements at the basis of this association. The aim of our study was to determine the influence of seasonal variations and weather on AMI hospital admissions. METHODS: We correlated the daily number of AMI cases admitted to a western Sicily hospital over twelve years and weather conditions on a day-to-day basis. Information on temperature, humidity, wind force and direction, precipitation, sunny hours and atmospheric pressure was obtained from the local Birgi Air Force base. A total of 3918 consecutive patients were admitted with AMI over the period 1987-1998 (2822 men, 1096 women; M/F: 2,58). RESULTS and CONCLUSIONS: A seasonal variation was found with a significant winter peak. The results of multivariate Poisson analysis show in both sexes a significant association as regards the incidence relative ratio between the daily number of AMI hospital admission and minimal daily temperature and maximal daily humidity. The incidence relative ratios (95% confidence intervals) were, in males, 0.95 (0.92-0.98) (p

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Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Meteorological Factors, Precipitation, Solar Radiation, Solar Radiation, Temperature

Temperature: Fluctuations

Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

Geographic Location:

resource focuses on specific location

Non-United States

Non-United States: Europe

European Region/Country: European Country

Other European Country : Italy

Health Impact: ☑

specification of health effect or disease related to climate change exposure

Cardiovascular Effect, Other Health Impact

Cardiovascular Effect: Heart Attack

Other Health Impact: Hospital Admissions

Resource Type: ☑

format or standard characteristic of resource

Research Article

Timescale: ☑

time period studied

Time Scale Unspecified